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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

TRAN, DIEM T

ART UNIT PAPER NUMBER

3748

DATE MAILED: 01/29/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,673

Applicant(s)

MARRECAU, WILLY

Examiner

Diem Tran

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1,2,4-8,10,12 and 14-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1,2,4-8,10,12 and 14-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

This office action is in response to the Request for Reconsideration filed on 11/26/03. The arguments with respect to claims 1, 2, 4-8, 10, 12, 14-24 were deemed persuasive; therefore, the finality of the last action is hereby withdrawn and a new non-final rejection is set forth below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-7, 10, 12, 14-17, 20-24 are rejected under 35 U.S.C. 103(a) as unpatentable over Retallick (US Patent 4,597,262).

Regarding claims 1, 16, Retallick discloses a method of regeneration a filter of diesel exhaust particulate filter system, said method comprising as steps:

providing a porous membrane in the form of a metal fiber web (see col. 4, lines 50-52, 56-58); using said membrane as filter during a filtration period; and using said membrane as a surface combustion burner membrane during a regeneration period (see col. 4, lines 61-68, col. 5, lines 3-9). The background of the invention (col. 1, lines 36-39) suggests the use of stainless steel for the fiber web. In view of this suggestion, it

would have been obvious to one having ordinary skill in the art to utilize stainless steel in that, such type of steel is resistant to corrosion caused by the exhaust gases.

Regarding claims 2, 20, Retallick discloses an exhaust particulate filter system, comprising:

- a first fiber web filter (110) for filtering an exhaust flow;

- a second fiber web filter (111) for filtering said exhaust flow; a fuel supply (136, 137) coupled to said first and second fiber web filter (see Figure 4);

- a valve unit (112) configured to direct said exhaust flow to said first or second fiber web filter when directing fuel to said second or first fiber web filter to have said second or first fiber web filter function as a second or first surface combustion burner membrane (see col. 6, lines 47-50, 58-60).

Regarding claims 4, 5, 10, Retallick further discloses the step of providing fuel to said membrane during the regeneration period (see col. 4, lines 61-66).

Regarding claims 6, 12, 14, 15, Retallick further discloses the step monitoring a pressure across said membrane during the filtration period (see col. 5, lines 24-31).

Regarding claim 7, Retallick discloses the step of generating a control signal to regenerate said membrane, once the pressure across said membrane exceeds a predetermined level (see col. 6, lines 7-14).

Regarding claims 17, 21, 22, Retallick further discloses that said stainless steel fiber web filters is completely metallic (see col. 1, lines 36-38, col. 4, lines 49-52, 56-60).

Regarding claim 23, Retallick further discloses that said exhaust flow comprises a diesel exhaust flow (see col. 3, lines 36-37).

Regarding claim 24, Retallick further discloses that said fuel supply comprises a diesel fuel supply (see col. 4, lines 61-64).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Retallick (US Patent 4,597,262) as applied to claim 4 above, in view of Shinzawa et al. (US Patent 4,567,725).

Retallick discloses all the claimed limitations as discussed in claim 4 above, however, fails to disclose that the amount of fuel provided is reduced after initiation of a flame at said filter during said regeneration period. Shinzawa teaches that it is conventional in the art, to reduce the amount of fuel provided after initiation of a flame at said filter during said regeneration period (see col. 19, lines 7-10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have reduced the amount of fuel as taught by Shinzawa in the Retallick method for decreasing the amount of fuel consumption during the regeneration process.

Claims 18, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Retallick (US Patent 4,597,262) as applied to claims 1, 2 above, in view of design choice.

Regarding claims 18, 19, Retallick discloses all the claimed limitations as discussed in claims 1, 2 above; however, fails to disclose said fiber web having fiber diameter of about 22 micrometers.

Regarding to the diameter of the fiber web of about 22 micrometers would have been an obvious matter of design choice well within the level of ordinary skill in the art, depending on variables such as material of the filter, mass flow rate of the exhaust gas, condition of the filter as well as the engine operation condition. Moreover, there is nothing in the record which establishes that the claimed time period parameters present a novel or unexpected result (See *In re Kuhle*, 562 F. 2d 553, 188 USPQ 7 (CCPA 1975)).

Response to Arguments

Applicant's arguments filed on 11/26/03 have been fully considered and are persuasive. The finality of the last action is hereby withdrawn and a new non-final rejection is set forth above.

Conclusion

Any inquiry concerning this communication from the examiner should be directed to Examiner Diem Tran whose telephone number is (703) 308-6073. The examiner can normally be reached on Monday -Friday from 8:00 a.m.- 5:30p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (703) 308-2623. The fax number for this group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is

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(703) 308-0861.

DT
January 21, 2004



Diem Tran
Patent Examiner
Art unit 3748



THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700